Adhesives suitable for this purpose are commercially available. One such adhesive is available from the Loctit Corporation, as adhesive 3321, part no. 19739. The adhesive can be cured to a solid state with an exposure time in the range of tens of seconds.

It is understood that the above-described embodiments are merely illustrative of the possible specific embodiments which may represent principles of the present invention. Other arrangements may readily be devised in accordance with these principles by those skilled in the art without departing from the scope and spirit of the invention.

What is claimed is:

1. Apparatus for securing an optical apparatus at a fixed relative location within a range of motion, comprising:

a first housing member holding the optical apparatus;

a first bracket member;

compliant apparatus for holding the first housing member and the first bracket member loosely together, while permitting relative motion between the first housing and the first bracket member through a range of motion;

a curable fixing element applied between areas of the first housing member and the first bracket member for securing the first housing member and the first bracket member together in a fixed position within the range of movement, the fixing element applied while in a liquid state to permit said relative motion, said fixing element curable to a solid state during a curing process, wherein the first housing member and said first bracket member are fixed in said relative position.

2. The apparatus of claim **1** wherein said curing process comprises the application of light at a predetermined spectral range to said fixing element.

3. The apparatus of claim **2** wherein said first bracket member includes structural portions which are transparent to said light of said predetermined spectral range.

4. The apparatus of claim **2** wherein said predetermined spectral range is the ultraviolet range.

5. The apparatus of claim **1**, wherein the compliant apparatus comprises a first set of interlock elements on said middle bracket and a second set of interlock elements on said housing, wherein said first and second sets are interlocking to hold said bracket and housing loosely together.

6. The apparatus of claim **5** wherein said first set of interlocking elements includes a lug element having a barbed end, and said second set of interlocking elements includes a protruding ear portion, said barbed end of said lug element engagable over said protruding ear portion to provide said interlocking.

7. The apparatus of claim **1** wherein said complaint apparatus further includes a biasing structure for biasing the relative position of said first housing and said first bracket to a rest position within said range of motion

8. The apparatus of claim **7** wherein said biasing structure comprises a plurality of resilient finger elements extending from said middle bracket and contacting a surface of said housing.

9. The apparatus of claim **1** wherein said first bracket member further comprises a first cavity defining feature, said housing member further comprises a second cavity defining feature, and wherein first and second cavity defining features cooperate together to define a first cavity for accepting said curable fixing element, and wherein said curable fixing element when cured forms an adhesive and mechanical interlock holding said first housing and said first bracket together.

10. The apparatus of claim **9** wherein said first cavity defining feature includes first and second spaced, aligned tab elements each having a hole defined therein, and wherein the holes are generally aligned colinearly, and said second cavity defining feature includes a third tab having a hole formed therein, and wherein said third tab is receivable between said first and second tabs such that said holes are generally aligned to form said cavity.

11. The apparatus of claim **10** wherein said hole formed in said third tab is of larger diameter than said holes formed in said first and second tab

12. The apparatus of claim **1** wherein said optical apparatus includes an optical sensor.

13. Apparatus for securing an optical apparatus at a fixed relative location within a range of motion, comprising:

a first housing member holding the optical apparatus;

a middle bracket member;

compliant apparatus for holding the first housing member and the first bracket member loosely together, while permitting relative motion between the first housing and the first bracket member through a first range of motion;

a second housing member;

apparatus for holding said middle bracket to said second housing member while permitting relative motion between the middle bracket and said second housing member through a second range of motion;

a first curable fixing element applied between areas of the first housing member and the middle bracket member for securing the first housing member and the middle bracket member together in a fixed position within the range of movement, the fixing element applied while in a liquid state to permit said relative motion, said fixing element curable to a solid state by a curing process, wherein the first housing member and said middle bracket member are fixed in said relative position; and

a second curable fixing element applied between areas of said middle bracket and said second housing member for securing the middle bracket and said second housing member together in a fixed position within the second range of motion, the second fixing element applied while in a liquid state to permit said relation motion within said second range of motion, said second fixing element curable to a solid state by said curing process, wherein the second housing member, said middle bracket and said first housing member are rigidly secured together in an optical assembly.

14. The apparatus of claim **13** wherein said curing process comprises the application of light at a predetermined spectral range to said fixing element.

15. The apparatus of claim **14** wherein said first bracket member includes structural portions which are transparent to said light of said predetermined spectral range

16. The apparatus of claim **14** wherein said predetermined spectral range is the ultraviolet range

17. The apparatus of claim **13**, wherein said middle bracket member further comprises a first cavity defining feature, said second housing member further comprises a second cavity defining feature, and wherein first and second cavity defining features cooperate together to define a first cavity for accepting said second curable fixing element, and wherein said second curable fixing element when cured forms an adhesive interlock fixedly securing said first housing and said first bracket together

18. The apparatus of claim **13** wherein said apparatus for holding said middle bracket to said second housing member includes a plurality of clip member protruding from and integrally formed with said middle bracket

19. The apparatus of claim 13 wherein said middle bracket includes portions fabricated of a material transparent to said light of a predetermined spectral range.

20. An optical scanner for performing optical scanning functions, comprising:

a transparent scanning window;

an optical scanner housing, said housing securing said window and comprising optical light path defining elements to define an optical path between said window and a lens element, said lens element fixed in position relative to said scanner housing;

an optical sensor array positioned to intercept image light passing through said lens element;

apparatus for securing said optical sensor array at a fixed relative location within a range of motion relative to said scanner housing, comprising:

a sensor housing member holding the sensor array;

a middle bracket member;

compliant apparatus for holding the sensor housing member and the first bracket member loosely together, while permitting relative motion between the sensor housing and the middle bracket member through a first range of motion;

apparatus for holding said middle bracket to said scanner housing member while permitting relative motion between the middle bracket and said scanner housing member through a second range of motion;

a first curable fixing element applied between areas of the sensor housing member and the middle bracket member for securing the sensor housing member and the middle bracket member together in a fixed position within the range of movement, the first fixing element applied while in a liquid state to permit said relative motion, said first fixing element curable to a solid state by a curing process, wherein the sensor housing member and said middle bracket member are fixed in said relative position; and

a second curable fixing element applied between areas of said middle bracket and said scanner housing member for securing the middle bracket and said scanner housing member together in a fixed position within the second range of motion, the second fixing element applied while in a liquid state to permit said relation motion within said second range of motion, said second fixing element curable to a solid state by a curing process, wherein the scanner housing member with said sensor array, said middle bracket and said scanner housing member are rigidly secured together in an optical assembly.

21. The optical scanner of claim 20 wherein said curing process comprises the application of light at a predetermined spectral range to said first and second fixing elements.

22. The optical scanner of claim 21 wherein said first bracket member includes structural portions which are transparent to said light of said predetermined spectral range.

23. The apparatus of claim 21 wherein said predetermined spectral range is the ultraviolet range.

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